

NETWORKWORLD

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Economy, industry consolidation take shine off Interop

BY JIM DUFFY

The recent Interop Las Vegas had its bright spots: cloud computing generated genuine buzz; HP flexed its growing muscles; and dozens of innovative products were rolled out. But there was no escaping the fact that the dour economy and significant market consolidation have taken their toll on the network industry and its biggest general tradeshow.

Interop officials were still tabulating attendance numbers at press time, but some estimates put the total at 15,000, about 25% less than the previous year. Or put another way, about half that of the International Council of Shopping Centers show, which took place in Vegas the same week.

Beyond the attendance figures, though, one of the most striking changes was Cisco's modest physical presence at the event. Its booth size was a fraction of what it has been in past years, and what it did have was mainly to highlight its partners' wares. Cisco had one executive on a keynote panel, but otherwise gave way to leaders from HP, F5 Networks and Skype (Cisco CEO John Chambers last spoke at Interop in 2007).

As one attendee put it: "You can't put on a networking conference without Cisco."

There was talk that the company would not have come at all were it not afforded free exhibition space, though an Interop spokeswoman assured

See Interop, page 16



Interop show floor traffic started strong but became noticeably lighter as the event went on.

Win 7 may be tempting, but XP to drive migration

BY JOHN FONTANA

Corporate migration to Windows 7 may be less about evaluating the new Microsoft operating system and more about how to properly gauge the correct time to get XP off client desktops.

The equation corporate IT pros will have to figure out is how long it will take to get all their XP desktops to Win 7 before XP support runs out or before application vendors quit producing upgrades or new software for XP, which some predict could come as early as 2012.

The widely celebrated Win 7 is slated to arrive this fall to replace Windows Vista, which after 30

■ Read a review of Windows 7 and Windows 2008 Server RC. It's a win-win. Page 18

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CLEAR CHOICE

months has failed in the eyes of IT buyers.

Win 7 offers a host of tantalizing corporate features such as AppLocker, DirectAccess, Branch Cache and XP Mode, a virtualization technology that should buy time for users who migrate but must hold on to key legacy applications.

Gartner predicts that more than half of the
See Windows 7, page 14

WIMAX
changes
lives
in rural
Thailand

PILOT PROJECT BRINGS
BROADBAND-BASED EDUCATIONAL
PROGRAMS TO REMOTE COMMUNI-
TIES. PAGE 24



Rating the hypervisors

VMware hypervisor still king for enterprise-class workloads, Burton Group says. Page 12

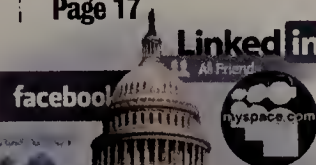
Want to friend the feds?

Social media sites where you can interact with the U.S. government. Page 17

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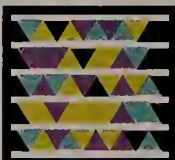
Ubuntu Server: Lean, mean, cloud- building machine

Canonical's Ubuntu Server 9.0.4 is a fast, free, no-frills Linux distribution well suited for VARs and OEMs. Page 28



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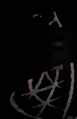


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GOODBADUGLY

Wireless windfall

The economic stimulus package passed earlier this year will provide a \$6.8 billion windfall to the wireless communications industry, projects ABI Research. In a new report, ABI says the government will spend \$6.8 billion for "wireless communications upgrades and new deployments" over the next two years, thus providing "a significant one-off opportunity for wireless equipment vendors." ABI analyst Stan Schatt estimates that roughly \$1.07 billion of the money will be spent on upgrades or deployments of Wi-Fi services.



Preying on Twitter users

Twitter users have been tricked into divulging their login and password details to a Web site that then spammed their contacts. The culprit is a Web site called TwitterCut. Some Twitter users began getting a message that appeared to be from one of their friends and included a link to the TwitterCut Web site. The message implied they could gain more Twitter contacts by following the link. At one time TwitterCut looked quite similar to the real Twitter login page, says Mikko Hypponen, chief research officer for security vendor F-Secure. If a person entered their login details, TwitterCut would then send the same message via Twitter to all of the victim's contacts, a kind of phishing attack with worm-like characteristics. No malicious software is installed on a user's machine, Hypponen says.

Cartier: "Watch" out Apple

French jeweler Cartier filed and then withdrew a lawsuit against Apple for trademark infringement, according to Associated Press and other news outlets. The issue stemmed from App Store developer Digitopolis' Fake Watch and Fake Watch Gold Edition, time-telling apps for the iPhone that Cartier says improperly used its trademarks. But Cartier wound up withdrawing its suit, according to the *Wall Street Journal*, after having its concerns addressed.



PILOT PROJECT BRINGS BROADBAND-BASED EDUCATIONAL PROGRAMS TO REMOTE COMMUNITIES. PAGE 24



WiMAX changes lives in rural Thailand

Students need to be better prepared in this job market

Re: Wanted for hire: generalists, not IT specialists (<http://tinyurl.com/n2fqg2>):

With the mounting job losses continuing to rise, the impact to college graduates not being able to secure employment will be higher.

As a former executive from corporate America who works with colleges and universities to assist students with being better prepared for corporate America or entrepreneurial opportunities we are noticing a large problem that is being overshadowed by the foreclosures and the failures of the auto and banking industries.

College graduates in 2009 and the foreseeable future will have a bleak job outlook due to the bad economy. This is the worst job situation we've seen in a very long time. With the shortage of jobs, those that will get the small number of opportunities will need to be prepared to offer value Day One. These students will need to have specific leadership skills, and some required system navigation skills that are essential for their survival.

With the continued failures of many companies we must ensure that the college graduates entering the workforce are better prepared to perform in the roles and responsibilities they seek and have the skills to lead the companies in the U.S. to better conditions than we are experiencing today.

Ted Gee

Incompetence starts at the top

Malware knocks out U.S. Marshals Service network (<http://tinyurl.com/qfv286>):

If this article is deemed to be accurate, then all signs point to gross incompetence and gross negligence from the top on down.

This is not rocket science or brain surgery. This is NetAdmin-101. All senior and mid-level civil service IT managers involved in this fiasco should be fired on the spot.

Oh, that's right, in this day and age civil servants can't be terminated. This is reason one why these examples of gross incompetence and negligence continue to occur.

Spee

Don't blame open source

Re: Does open source encourage rootkits? (<http://tinyurl.com/qk2e4>):

Let be fair about this — it doesn't matter who posts what source code or where, in today's society it's just a simple case of doing a course at college or university, saying that, now days the kids are learning more and more about the technology in schools, we can not blame the teacher for what a student walks away with, we can only hope that lessons learned are not used in a malicious way.

The open source community is a community doing what they can to help in the learning process, just like the teachers in school, colleges and university, the same rules apply, we can not blame the open source community for the readers intent.

Anon

The cloud is taking off

Re: Is cloud computing the answer? (<http://tinyurl.com/qhmgf4>):

I agree that cloud adoption is in its early stages. However, in our work with over 150 enterprises, we've found that the cloud is delivering significant benefits today. These range from significant cost savings, for example, Gmail/calendar cost about one-third of on-premise alternatives, to orders of magnitude improvements in time-to-value, for example, Starbucks was able to launch a highly scalable Web site to support a national campaign in just four weeks. Over the past two years, cloud computing has moved into the mainstream with companies like Japan Post, Dell, Cisco, Starbucks and many more adopting the cloud. Cloud computing delivers real results, that's why 90%-plus of companies who've used cloud computing plan to expand their investments in it.

Anonymous

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 492 Old Connecticut Path, Framingham, MA 01701-9002. Please include phone number and address for verification

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BLOGOSPHERE

■ **Expert chides Google, others on cloud security.** *Network World's* Google Subnet reports that even as they become responsible for handling and storing more user and enterprise data, cloud vendors continue to fail to provide adequate security for all that data. Or so says cloud expert Chris Soghoian, a student fellow at Harvard University's Berkman Center for Internet and Society. He says more users and enterprises are increasingly turning to the cloud to handle everything from mail to spreadsheets and other collaborative applications. In some cases, individual users aren't even aware that their enterprises have shifted to cloud computing. Today's cloud vendors still don't take even the most rudimentary security precautions as they look to manage and store all that data. For example, while SSL encryption is practically the standard for other businesses, such as banks and e-commerce sites, cloud vendors don't use SSL for much other than their log-in screens.

<http://tinyurl.com/pc5u4o>

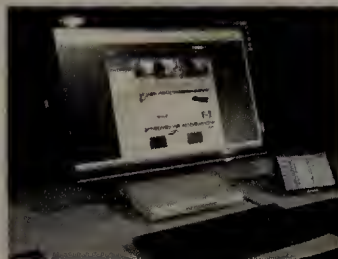
■ **E-mail can get people off their lazy butts.** *Network World's* Alpha Doggs blog noticed a Kaiser Permanente study that found that an e-mail intervention program ("good spam"?) can encourage people to eat healthier and become more physically active. The study involved 787 KP employees in Northern California. It involved e-mailing a control group with feedback on their lifestyles at the start of the study and e-mailing others with tips and goals such as eating fruit for snack or walking during lunch. At the end of the 16-week trial, the intervention group was more physically active and eating better, especially those who at the start of the trial were not very fit or good about their eating. <http://tinyurl.com/ogedyx>

■ **Microsoft's netbook dilemma indicate rough days ahead for Windows.** Mitchell Ashley is hearing new rumors that Microsoft is limiting Windows 7 Starter Edition to netbooks with 10.2 inch screen size or less. What? Say again, please. That would be like setting the price of your next automobile based on the size and surface area of the vehicle's windshield. That's at direct odds with the fact the most netbooks will likely have GPUs, like Nvidia's 9400M used in laptops today (which have more than 10.2 inches of screen real estate.) And external monitors connected to a netbook will surely still have the ability to exceed the size of the screen on netbooks' built in screens. If netbooks do turn out to have legs in the market, Microsoft will have some tough decisions ahead. <http://tinyurl.com/qdpoby>

INTERVIEWS, THE COOLEST TOOLS AND MORE

ITvVIDEO

COOL TOOLS:



Up close with DisplayLink

Keith Shaw gets a demo of the latest DisplayLink advances, which USB-enable high-performance monitors as well as allow netbooks to attach to monitors via USB.

<http://tinyurl.com/ozhz5z>

IDG NEWS WIRE:



Bendable TV screen displayed

Japan's public broadcaster NHK displayed a prototype 5.8-inch display that can be unrolled and rolled up on demand. Based on Organic LED, the display has a relatively low resolution of 213 by 120 pixels.

<http://tinyurl.com/pyls2n>

PANORAMA PODCAST:



Productivity software: The next generation

Keith Shaw talks with Wendy Steinle from Novell about the new batch of wikis, blogs and other collaborative software that aims to help companies become more productive and deliver value.

<http://tinyurl.com/p5v6gh>

BEST OF NWW'S NEWSLETTERS

Savvy mgmt.: Putting IT on a diet

Network/Systems Management:

Enterprise IT managers faced with budget cuts and headcount reductions might not think there is anything left to lose, but industry watchers argue that most IT organizations can continue to squeeze more fat from their departments by way of inefficient processes and outdated software licenses. "The economy is forcing IT departments to go back to basics, in a sense, to squeeze more out of existing infrastructure. Because the management of existing systems can be up to 70% of IT costs, IT is starting to understand the importance of better management in their efforts to get leaner," says Evelyn Hubbert, senior analyst at Forrester Research. IT management and automation technologies could help lessen manual labor associated with operational tasks, especially if headcount is lower than normal. Such technologies might warrant an IT budget investment even in a downturn considering the potential ROI they could deliver.

<http://tinyurl.com/pu5fpw>

IT best practices: Network access control is one of those technology categories that has a lot of promise but not a lot of users, despite the fact that solutions have been available for

years. There can be significant challenges to deploying an enterprise solution. For example, creating the policies that provide just the right level of security without being overly aggressive isn't easy. Also, it's difficult to find a solution that fits into a multi-vendor infrastructure, both on the network as well as the client side. In 2006, a couple of veteran engineers from Cisco started a company to address those very issues that seemed to be holding customers back from deploying NAC. This was the birth of Avenda Systems and its multifunction platform for network access security.

<http://tinyurl.com/pck83w>

Cloud security: Data loss is possible anywhere, including in the networks of cloud computing providers, but the unique challenges there are significant enough that they are getting a special look from insurers. For one, The Hartford has a dedicated insurance offering called CyberChoice that pays off if failure of the IT infrastructure results in liability for loss of personal information, intellectual property and the like. The insurance pays for investigation of the failure and payment of the costs of notifying customers if there is a reportable breach.

<http://tinyurl.com/ryhxup>

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Google's Wave packs online features in one tool

Google is set to release to developers an early version of a collaboration and communication tool that consolidates features from e-mail, instant messaging, blogging, wikis, multimedia management and document sharing. Called Wave, the Web application is the equivalent of a Swiss Army Knife for consumer online services and possibly one of the riskiest and most ambitious endeavors Google has embarked upon in years. In the works for about two years, Wave has the potential to drive people away from popular Google products such as Gmail, Google Docs, Google Talk, Picasa, Blogger and Sites, as well as from similar products from competitors such as Yahoo, Microsoft and AOL. However, Wave could also fall flat if people don't understand how it can be useful, or if they can't be convinced to give up their e-mail, blogging, IM and other individual online services. <http://tinyurl.com/m376ht>



Cisco enhances routers, switches for collaboration. Cisco has extended its branch routers and LAN switches in an effort to improve the collaboration capabilities of enterprise customers. Cisco is enhancing its Integrated Services Routers and Catalyst 4500 and 6500 switches with new models, line cards and software to address mobility, sustainability and unified communications requirements. For the ISR, Cisco is unveiling two models at the low end: the 880 VDSL2 and 890. Both are targeted at small businesses and offer faster broadband options and increased performance, with integrated security and wireless connectivity. For the Catalyst LAN switches, Cisco unveiled a supervisor module for the Catalyst 4500 series. The 6L-E is intended to bring media collaboration and increased energy efficiency to the wiring closet switches through support for Power over Ethernet Plus at 30 watts. <http://tinyurl.com/nysmkkm>

Microsoft debuts Bing. Microsoft has picked Bing as the branding for its new search engine, putting to rest months of speculation about what the next iteration of Live Search would be called. Microsoft said it designed Bing as a "decision engine" to help people search the Web more intelligently and to simplify everyday tasks such as getting directions. A feature called Best Match, for example, surfaces what the engine considers the best result for a search query and calls it out for the user. Another feature called Deep Links gives people more



insight into what resources a site offers. Microsoft has redesigned its search engine in the hopes of closing the gap with Google, which has the lion's share of the search queries. It has been reported that the company is spending \$80 million to \$100 million to promote Bing. <http://tinyurl.com/lveuxk>

IT wages held steady in early '09. A new survey by the Philadelphia IT outsourcing firm Yoh finds that U.S. tech wages remained fairly steady during the first quarter of this year, indicating some level of stability in hiring patterns even as the global economic recession continues. On average, hourly tech wages peaked at \$32.81 during the early weeks of the quarter, a 1.62% rise from the previous year. At another point in the first quarter, wages dropped to \$31.05 and ended the period at \$31.46. In the fourth quarter of 2008, average hourly tech wages hovered in a similar range, finishing up the year at \$31.33, according to Yoh's previous study. Companies appear to be taking a "wait and see" approach to hiring and pay, according to Yoh President and CEO Bill Yoh. <http://tinyurl.com/l657ev>

EMC inks deal to acquire Configuresoft. EMC last week announced plans to acquire Configuresoft, a maker of server configuration, change and compliance management software, for an undisclosed sum. "Customers are looking for new tools and processes to help them more effectively manage the virtualized data center. Server configuration and change management are among the top challenges faced by IT," says Chris Gahagan, EMC senior vice president. Industry watchers have speculated that EMC is working to displace one of the "Big 4" management software makers — BMC, CA, HP and IBM — with its man-

agement-centric acquisitions. But it is unclear if the Configuresoft purchase will help EMC compete for broader IT management dollars and change customers' perception of EMC as mainly a storage and storage management vendor. <http://tinyurl.com/kn6zls>

Time Warner ditches troubled AOL unit. Time Warner will finally rid itself of AOL, its struggling Internet subsidiary, by spinning it off as a publicly traded company. Time Warner executives have been considering for years whether and how to dump AOL, whose transformation into an ad-supported business has been a disappointment. The separation will allow Time Warner to continue "reshaping" itself with a focus on its content business, while AOL will gain more flexibility to seek Internet market success, Time Warner said. To proceed with the separation, Time Warner will first buy the 5% of AOL that Google owns, having paid \$1 billion for it in December 2005. That transaction will happen in this year's third quarter. <http://tinyurl.com/nyvdtj>

Server revenue took a dive in Q1. A precipitous fall in worldwide server shipments triggered a sharp decline in revenue for server makers during the first quarter of 2009, IDC said last week. Worldwide server unit shipments declined 26.5% year-over-year in the first quarter to around 1.49 million units, the largest unit shipment decline in five years. Worldwide factory server revenue was down 24.5% to \$9.9 billion in the first quarter. Server shipments and revenue fell as customers tightened IT budgets and held back on refreshing server hardware, IDC said. The revenue decline has trickled into the second quarter of this year as well. Looking ahead, revenue could grow slightly year-over-year during the fourth quarter of 2009, driven partly by IT budgets opening up, according to Daniel Harrington, a research analyst with IDC. <http://tinyurl.com/lmomm5>

Microsoft's Zune HD coming in fall with OLED, HD radio. A month after many details of Microsoft's new Zune HD player were leaked by blogs, the company finally made it official: The Zune HD will arrive in the United States this fall and will have an OLED touchscreen and HD radio among its main features. The OLED screen has a 480 by 272 pixel resolution so it can show widescreen video across the entire display when flipped on its side. Zune HD will also come with a Web browser and Wi-Fi for connecting to the Internet and Microsoft's Zune store. Through the player, users will be able to access TV and video content that's already offered on the Xbox Live Video Marketplace. Microsoft didn't announce pricing, a detailed launch schedule or international availability. <http://tinyurl.com/mgvxye>

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VMware hypervisor still king

Microsoft, Citrix catching up but missing critical features

BY JON BRODKIN

VMware is still the only virtualization vendor whose hypervisor meets every enterprise requirement, but rivals Citrix, Microsoft and Virtual Iron are closing in on that goal, according to research by the Burton Group.

VMware, long the market share leader in x86 virtualization, offers 100% of the features required to run enterprise-class, production workloads with the vSphere hypervisor.

Citrix XenServer and Virtual Iron are nipping at VMware's heels with 85% and 83% of requirements met, respectively, while Microsoft's Hyper-V lags behind with 78% of requirements met.

The Burton Group evaluates hypervisors based on an extensive list of criteria within the categories of high availability, live migration, memory management, networking, storage, security, compute, paravirtualization, management, power management, and licensing and support.

The analyst firm presented its research in a teleconference last week to help customers figure out which hypervisors meet their needs, and which features are truly important as opposed to simply being "marketing checkboxes."

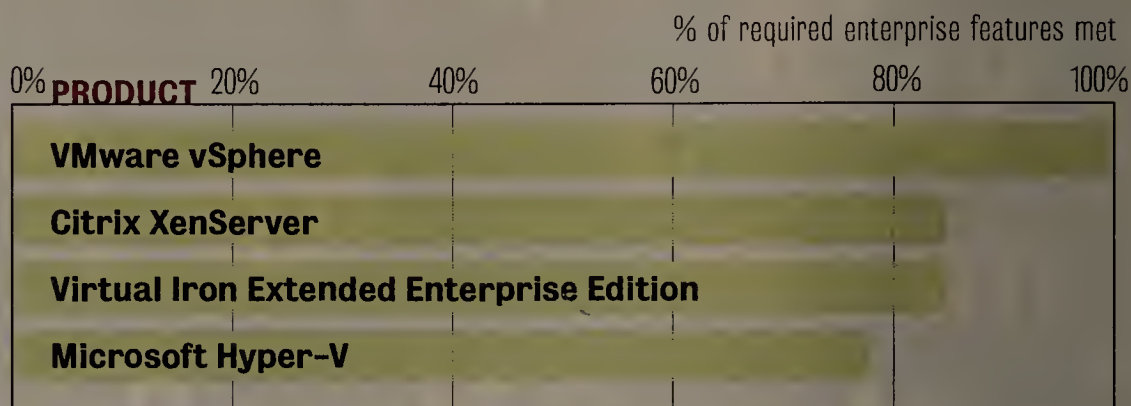
"Hypervisor vendors would all have you believe they are better than the other guy, but their product data sheets never tell the whole story," says Burton Group analyst Chris Wolf.

The Burton Group divided features into three categories: those required to operate production workloads; preferred features that are important but not required; and features that are simply optional.

For example, high availability capabilities including the elimination of single points of failure and scalability to at least eight physical

How the hypervisors stack up

Burton Group examined the leading virtualization hypervisors, rating them on the percentage of enterprise requirements met. These requirements included high availability, live migration and memory management.



nodes are required for production. Live migration, the ability to move running virtual machines (VM) from one host to another, is required. Other required features include support of hardware-assisted memory virtualization; support for iSCSI and Fibre Channel networked storage; and security features including role-based access controls and auditing of administrative actions.

Examples of preferred features include memory overcommit; centralized virtual switch management; an integrated firewall; centralized hypervisor patch management; automated VM provisioning, and hypervisor licensing based on each physical server instance.

Examples of optional features include automated server shutdown and start-up to conserve power; integration with third-party high availability software; and integration with storage virtualization appliances.

In addition to meeting 100% of required features, VMware holds the lead by offering more than 80% of preferred and optional features.

Citrix, at 85% of required features, falls short mainly in the security realm. Security logging and auditing of administrative actions; directory services integration; and role-based access controls are all missing from XenServer 5.0. However, directory services and role-based access control are expected to be added in the 5.5 version, Wolf says. Citrix is close to being ready for enterprise workloads, Wolf says.

Citrix offers 50% of preferred features and 58% of optional ones.

Virtual Iron, which is being purchased by Oracle, checks in at 83% of required features. Missing elements include an enterprise-class support policy; hot-add (the ability to add storage to a virtual server while it's running); a fault-tolerant management server; and integra-

tion with third-party management tools. Virtual Iron provides 46% of preferred features and 36% of optional elements.

Microsoft's Hyper-V offers 78% of required features but is missing live migration; hot-add; fault-tolerant management; hardware-assisted memory virtualization; and ability to provide a minimum of two virtual CPUs for each guest operating system. Microsoft also does not meet every high-availability requirement detailed by the Burton Group. Microsoft has promised to add live migration to its hypervisor, but has not yet made the feature available.

Microsoft offers 43% of preferred features and 68% of optional ones.

These four hypervisors aren't the only ones on the market; Burton Group only recently devised its criteria and is evaluating them in order of market share and requests from clients. Wolf says other vendors to be evaluated include Novell, Red Hat, Oracle and Parallels.

Although the guidelines seem pretty clear-cut, Wolf says each IT shop has to evaluate its own needs and choose a hypervisor accordingly. "Nothing is set in stone. You know your requirements better than anyone," Wolf's presentation stated. "Define your organization's virtualization requirements and stick to them." ■

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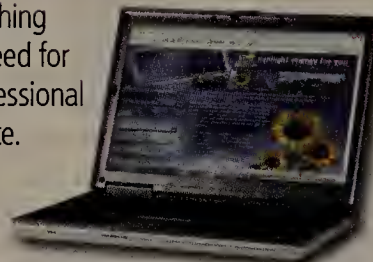
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Windows 7

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corporate Windows user-base is skipping Vista and aiming at Win 7.

While that means XP users won't have to tangle with Vista in name, it doesn't mean they will avoid the application compatibility issues that gave Vista a black eye. Win 7 is built on the Vista code base.

"If you are on XP, Windows 7 isn't going to solve a lot of Vista's migration problems," says Brett Waldman, a research analyst for IDC. "Going from Vista to Windows 7 should be a much easier transition than XP to 7."

Users who have deployed Vista have an easier path because Microsoft provides an upgrade option not available to XP users, and because they have already solved their application compatibility issues.

Microsoft says nearly all applications that run on Vista will run on Win 7 and early testing by users is beginning to validate that claim.

In addition, hardware upgrades made for Vista are relevant for Win 7 rollouts.

While those rollouts won't be painless for Vista converts, it is those on the XP side who will have to tap into their planning and organizational skills.

The predominant migration questions among those coming off XP are "when" and "how."

"What we are saying is that by the end of 2012 you should be off XP," says Michael Silver, vice president and research director at Gartner. With most large corporations taking 12 to 18 months to test and pilot a new operating system, the migration clock is ticking.

"If I target the end of 2012 to get XP out then you have your migration window," he says. "Organizations really need to be poised to do a lot of migrations on new machines and some existing ones in 2011 and 2012."

Silver says Gartner's recommendation is a conservative one that provides a 15-month buffer before XP support ends on April 8, 2014. Mainstream support for XP ended in April 2009, just a year after XP SP3 shipped.

Microsoft for its part told XP users last month that if they are just starting to test Vista that they should switch to Win 7.

Silver recommends those users switch only if it means less than a six-month delay in their current planning.

"If you have already done lots of testing or might be set to deploy you should continue with Vista," Silver says. "Vista is a difficult decision politically at this point, but the folks that have migrated to Vista are generally happy."

Hitching the migration horse to the Win 7 wagon, however, doesn't mean users won't have to take along issues that polluted Vista acceptance.

Applications that were not compatible with Vista won't work on Win 7. The new XP Mode, available with professional, ultimate and enterprise editions, will give users a bit of a respite, but not a panacea.

With both Win 7 (the host operating system)

Getting a handle on rollouts

Microsoft makes available a range of deployment tools from software that ships with Windows 7 up to management tools in its System Center lineup.

Tools	Use	Notes
Microsoft Assessment and Planning Toolkit	For inventory of hardware and devices.	Previously provided with Windows Vista Hardware Assessment Solution Accelerator.
Application Compatibility Toolkit (ACT)	For inventory of applications, to analyze compatibility, and create compatibility fixes for applications.	Version 6.0 will be released after Windows 7 ships. Connector will link ACT with System Center Configuration Manager.
Microsoft Deployment Toolkit	Assists with image creation as well as automating the operating system and application installation, data migration, and desktop configuration process.	Previously called Microsoft Solution Accelerator for Business Desktop Deployment.
Microsoft System Center	Set of management tools for large corporations.	Configuration Manager main integration point.
Windows Automated Installation Kit	Set of tools to ease the management and deployment of Windows images.	Hard-link migration, image configuration and Configuration Manager integration head list of new features.

and XP (guest) running on a single machine, users will be forced to maintain and patch two operating systems per desktop.

Analysts such as IDC's Waldman and Gartner's Silver say it's a short-term solution.

"To take full advantage of new enhancements in Windows 7, which is what users are paying for, the app needs to be built for Windows 7," Waldman says. He says XP Mode is likely a one-to-two-year Band-Aid.

"XP Mode might be the way we get around the fact that some of our institutional apps are behind the technology curve; it could be the answer," says Jeff Allred, manager of network services at the Duke University Cancer Center. He says patch management tools will make it easier to manage two operating systems on a desktop and that XP Mode's administrative considerations are not a show-stopper.

Allred is in the process of testing Windows 7, which he says is faster, more stable and seems leaner than Vista. "We are much happier with Windows 7 RC than Vista in its full shrink-wrap version," he says.

He says a Vista migration would have meant upgrading 60% of his hardware, something he was not prepared to do. With Win 7 and its smaller footprint, the majority of his hardware is already compatible.

The same is true for Wesley Stahler, senior system consultant at Ohio State University Medical Center, who is testing Win 7 from an Asus Eee netbook. He says the medical center is just now beginning migration discussions to move off XP.

"We have some clinical-based apps that work great on [Internet Explorer] 6, but on IE 8 [with Win 7] not so much," he says.

He says XP Mode might help, but "I would prefer not to support two operating systems."

Stahler says there are other features that are enticing or will help save money.

"Right now we are using two different products to do what BitLocker can do, so we could save money and administrative headache," he says. BitLocker is a full-disk encryption feature introduced with Vista and available in Win 7.

For its part, Microsoft offers its range of migration tools to help with a move to Win 7.

Microsoft also has added tools to its Windows Automated Installation Kit (WAIK), specifically to ease the management and deployment of Windows images.

The Windows System Image Manager lets users do low-level customization of an operating system image. The tool works with System Center Configuration Manager, which adds an administrative UI that lets users replicate information across their network. Integration with System Center management tools supports rollouts that scale to enterprise deployments.

Win 7 also features updates to Microsoft's ImageX command-line tool, which lets users capture, modify and deploy Windows images. The tool is rolled into Configuration Manager and given a GUI interface.

Deployment Image Servicing and Management also is part of WAIK and is used to apply updates and drivers to Windows images. ■



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Interop

continued from page 1

us that Cisco "ranked in the top tier of sponsor investment/spend in the event" and even produced a custom Web site for the show.

Some took Cisco's relatively low-key approach to the show as a sign of the company's utter dominance in Ethernet switching and IP routing.

"Interop needs Cisco more than Cisco needs Interop," says Zeus Kervala, a Yankee Group analyst. "Cisco's been trying to make [its own Cisco Live!] Networkers the premier networking show."

"What Interop has to hope for — and really where a lot of the focus of the keynotes should be — is how to promote the F5s, and 3Coms and HPs and companies like that, and establish them as real competitors to Cisco," he added. "That will make Cisco have to come back to Interop."

Indeed, companies — from Brocade to HP to 3Com to Juniper — are taking aim at Cisco as it attempts to gain greater control of data centers with a blend of network, storage and server offerings, and many of those companies did make noise at Interop. Whether they will give Cisco a real fight remains to be seen.

While HP disappointed Wall Street with its most recent financial results and CEO Mark Hurd was less than optimistic about IT spending for the rest of the year, Interop was HP's turn to shine.

The company boasted a massive booth just inside the entrance to the trade show floor that included a life-size Halo virtual conferencing room. It also joined Microsoft (a modest exhibitor at Interop) in announcing a four-year agreement to invest as much as \$180 million in building a complete corporate infrastructure for unified communications and collaboration. What's more, HP Senior Vice President Marius Haas delivered the opening keynote address and put the industry on notice that it was claiming the "clear alternative to Cisco" title.

The opportunity has perhaps never been better for HP ProCurve, which has been making substantial market share gains in Ethernet switching over the past couple of years to become the No. 2 vendor behind Cisco. At the same time, rivals such as Nortel have been struggling.

"Users are saying their networks are overly complicated, proprietary, expensive, and they are held hostage with no choices," Haas said. "There's no reason there can't be change driven by industry standards that puts customers back in control. There needs to be a catalyst though, with the willpower to make that change in the industry. HP is going to be that driving force."

To that end, HP ProCurve is expected to expand its data center switching arsenal with a 48-port top-of-rack 10G Ethernet switch; a data center core switch approaching or exceeding 100Gbps per slot; and Fibre Channel over Ethernet unified I/O switches (possibly via a deal with Brocade).

Separately, longtime Cisco rival 3Com was back at Interop for the first time in four years displaying its three brands: 3Com small business gear, H3C enterprise equipment and Tipping Point security tools. On the network equipment front, 3Com, like HP, stressed the opportunity to appeal to customers looking to do more with less.

This year's Interop was also a reflection on broad industry trends beyond classic networking, including cloud computing and mobile devices in the enterprise.

Interop included the Enterprise Cloud Summit show-within-a-show to focus on the huge industry movement around the concept of turning physical data center assets and resources into a virtualized service infrastructure. Merrill Lynch last year called cloud computing a \$100 billion opportunity, one that's being chased aggressively by traditional network and computing players such as Cisco, IBM and HP, as well as less traditional Interop sponsors such as Amazon, VMware, IBM, HP and

other executives were featured in cloud-themed keynote presentations.

Among other things, issues related to cloud pricing models were tackled at Interop.

"The reason cloud is compelling is the pricing levels," said Allan Leinwand, a Panorama Capital partner who moderated a vendor panel at the show. But the cloud industry has come up with several types of billing options, and they're not always easy to understand.

"You're talking about units that people don't normally think about," Leinwand said. "CPU hours: that's not something I go buy. I buy a blade server, and the hours are infinite, they're mine."

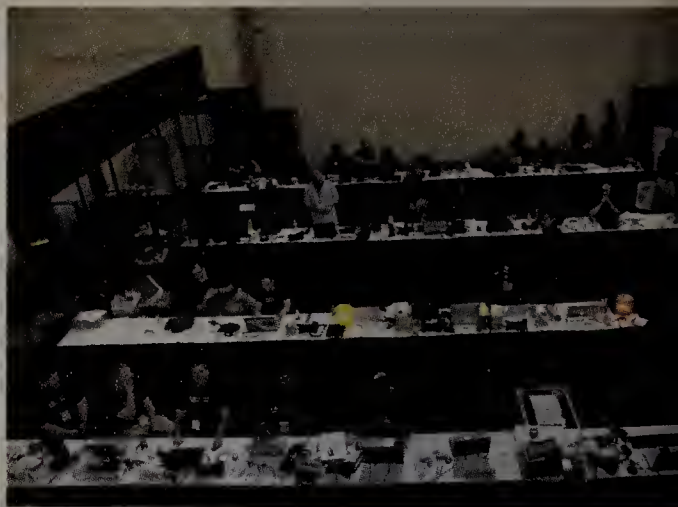
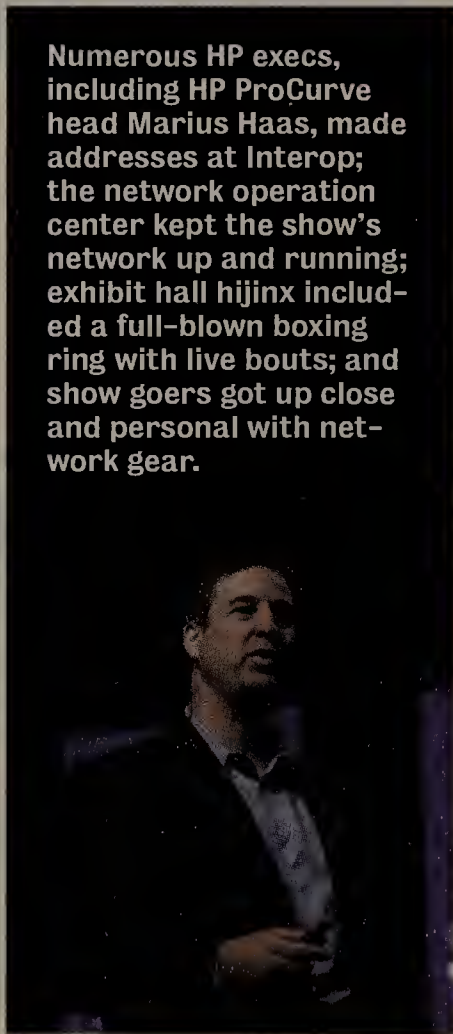
On the mobile front, a standing-room-only crowd took in a session on iPhones in the enterprise and raised a slew of questions about the security and management implications, especially when it's relatively simple for end users to "jailbreak" iPhones to run whatever applications they want on them.

Despite enthusiasm over such topics, results from surveys conducted at the show were indicative of the tough times in the IT industry and most industries in general. Some 58% of 930 attendees surveyed by Interop their IT budgets will be flat to down this year compared with 2008.

And even those that are spending aren't totally happy with their latest purchases. Virtualization, a huge component of cloud computing and next-generation data center architectures, has yet to prove its payoff, according to a survey by one vendor. Most of the 120 IT officials surveyed reported more problems with virtualization than benefits.

Regardless, many vendors were still pleased with the show, which had its attendance squeezed not just by the economy but also Swine Flu concerns. ■

Numerous HP execs, including HP ProCurve head Marius Haas, made addresses at Interop; the network operation center kept the show's network up and running; exhibit hall hijinx included a full-blown boxing ring with live bouts; and show goers got up close and personal with network gear.



Want to friend the feds?

Social media sites where you can interact with the U.S. gov't

BY CAROLYN DUFFY MARSAN

The U.S. General Services Administration last week launched a government-wide YouTube channel to provide one central location for citizens to view video clips created by 25 federal agencies. The U.S. Government Channel — which was viewed 82,000 times in its first week — is the latest effort by the federal government to embrace social media.

Martha Dorris, acting associate administrator for GSA's Office of Citizen Services and Communications, called the YouTube channel a "way for the public to be able to find all of the official U.S. government videos in one place."

Over the last year, GSA has signed legal agreements with Facebook, MySpace and seven other popular Web sites that allow agencies to interact directly with citizens. Many agencies also are engaged with Twitter, sending their news feeds and other official announcements over this real-time communications channel.

Dorris says GSA hopes to sign similar agreements with iTunes and LinkedIn.

"The Obama Administration's objective of creating transparent, open and participatory government — this technology really lends itself to that," Dorris says.

Here's a list of the Web sites where you can interact with federal agencies:

YouTube: The U.S. government channel on YouTube features hundreds of videos created by individual agencies such as the White House, NASA and the Federal Emergency Management Agency. You can find YouTube channels operated by individual agencies such as the Social Security Administration, or you can view videos by topic such as health and nutrition, or money and taxes. One video posted May 20 entitled "New Media Across Government" features Macon Phillips, White House director of new media, summarizing the federal government's new media efforts.

Facebook: When the GSA signed a terms of service agreement with Facebook in April, it highlighted the Web site's 200 million active users. The Department of Veterans Affairs, the Environmental Protection Agency and NASA are now engaging with citizens on Facebook. The National Park Service has invited citizens to share their stories and photos from trips to U.S. national parks. The State Department's Facebook page features a discussion board where citizens can comment on issues related to Pakistan, Afghanistan and Iran.

MySpace: GSA also signed an agreement with MySpace in April. Currently, GSA is providing a list of available jobs at MySpace Jobs. The White House's MySpace page features live video

streaming of important announcements such as the nomination of Sonia Sotomayor for the U.S. Supreme Court.

Flickr: The photo sharing site was among the first crop of social media sites embraced by the GSA back in March, when it announced what it called "landmark agreements" with popular new media providers. One of the most active participants on Flickr is the Library of Congress, which has a Flickr stream that showcases its many collections of historical black-and-white images.

Vimeo: GSA signed a deal with video sharing site Vimeo in March, citing the site's "high volume and innovation on the Web." So far, Vimeo hasn't gotten nearly the traction of YouTube in terms of having federal agencies post videos. One agency that is using Vimeo is the National Oceanic and Atmospheric Administration, which is showing videos of marine debris and its Earth-observing satellites.

Blip.tv: GSA's deal with blip.tv, also signed in March, hasn't generated as much buzz as its arrangement with YouTube. But the site does feature videos from NASA, such as the Discovery launch and life on the space station.

Blist: Blist is a Web site that lets government agencies publish databases online in a format that can be easily shared with the public. The Web site's goal is to promote citizen engagement around data that can be easily processed, visualized and analyzed. Among the public datasets available on Blist are American Recovery and Reinvestment Act Job Creation by Congressional District and Average Fuel Efficiency of U.S. Passenger Cars.

Slideshare: is a free Web site that lets federal agencies share presentations with citizens. You can use the site to embed slideshows on your own Web site, or you can share them publicly. Among the federal slideshows posted on this site are a presentation about federal identity management efforts made by an official with the White House Office of Science and Technology Policy and an explanation of the federal knowledge management initiative given by the head of a related working group.

AddThis: is a social bookmarking tool that is used by Web publishers and bloggers to spread their content across the Internet. When its deal with the GSA was announced in April, AddThis said it was already being utilized on federal Web sites run by the Department of State, the Department of Homeland Security and USA.gov.

Twitter: Many agencies are actively pushing information out to citizens using 140-character Tweets. GSA has been active on Twitter since December 2008 and now has more than 6,000 followers for its Usa.gov Twitterstream. The State Department is issuing warnings to travelers on Twitter, and the Center for Disease Control is providing the latest news about Swine Flu. ■

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Microsoft's two new OSs: A Win-Win

Windows 7 and Windows 2008 Server R2 combo provides additional benefits

BY TOM HENDERSON AND BRENDAN ALLEN

Microsoft released the Windows 7 and Windows 2008 Server R2 release candidates at the same time last month, with final versions of both products expected to ship by year-end. Undoubtedly, part of the message is that the desktop and server operating systems are supposed to work together and provide additional value when combined.

We found that implementing Win 7, Win Server and Microsoft Desktop Optimization Pack (MDOP) requires careful planning and attention to detail. But this trifecta offers a significant payoff in terms of virtualization and administrative policy controls.

Let's start with Windows 2008 Server R2. The major updates in this 64-bit-only release are a new version of Microsoft's Hyper-V virtualization hypervisor, branch cache of files and folders, improved IPv6 connectivity and DirectAccess remote connectivity ('VPN-less VPN'). In addition, a key ingredient for administrators is the rapid expansion of control offered by Microsoft's powershell.

Windows 7 comes in a confusing array of options, but for enterprise use, we recommend 64-bit versions of Windows 7 Ultimate and Enterprise. The third leg of the stool is Microsoft Desktop Optimization Pack (MDOP), which ships 90 days after the final production delivery date for Server R2 and Win 7.

You can use the W7/Server R2 combination without it, but the tools in the MDOP are fairly juicy and they're available for Vista use.

The current MDOP tools include application virtualization (called App-V), where applications are 'stubbed' onto the desktop but execute somewhere else, and Microsoft Enterprise Desktop Virtualization (called 'MED-V'), which includes deployment, policy administration, desktop recovery and remediation tools, as well as desktop error monitoring.

While MDOP is a separate product, enterprise deployment is likely to be popular and we wonder why it isn't included in the R2. There's potential danger in not using MDOP, too — especially when using a key feature of Win 7 — the hosting of Windows XP.

Win 7 will contain a Windows XP virtualized client mode, which on the surface looked troublesome to us. We understand that compatibility issues are one of the objections to the adoption of Windows Vista, but reeled at the thought of supporting two operating systems per user.

The way it works is that XP installs (via Windows VirtualPC Version 7) as a virtual machine (VM) guest of Windows 7 Professional, Ultimate or Enterprise editions. MED-V V2 would run the preloaded VM, and provide control.

In our quick deployment test, we found there's a lot of work to make XP usable as a Win 7 hosted operating system, but the payoff is reasonable control (with the optional MDOP-based MEV-V2) and the fact that XP applications can be made to look like normally appearing desktop applications on the Win 7 desktop and menus.

All of this presumed that our desktop host computer uses a V or VT-compatible AMD or Intel CPU and a sufficient amount of memory.

MDOP isn't required to stop VirtualPC hosting or any other application that we tried, however. If you want to lock out an application, AppLocker can do this for you. It's a method that prevents application launching (and installation, if it's part of a local policy) after a Win 7 machine joins an Active Directory domain. We found it effective to totally kill specific application execution — even specified malware executables.

Hyper-V V2 arrives

The release candidate for Server R2 contains a kind of Holy Grail for Microsoft, the first iteration of its competitive analog to VMware's Live Migration, which is the ability to take a VM operating systems instance — while it's running and alive — and move it to a new hardware server target. Formerly, Hyper-V required that a virtualized operating system

instance be shut down, moved, then restarted.

The idea behind Microsoft's Live Migration goes back to a concept that Microsoft first exposed years ago as Wolfpack, which was designed to 'cluster' two or more machines together so that if one machine failed, the remaining machine(s) would take over.

We found the process can work, but there are constraints compared with VMware.

Hyper-V V2 required us to first establish the systems as members of a Failover Cluster to make source and target servers designated for failover. Then we needed to set up a compatible iSCSI "quorum drive" that's used as cache between the migrating servers. This Clustered Shared Volume served as the quorum drive, and our first successful Live Migration went from there.

We were heartened that Microsoft can support Live Migration between machines using different CPUs — which frees us from having identical source and destination (for example captive vendor) hardware — except that it must be Intel-to-Intel or AMD-to-AMD.

Connecting external Win 7 clients to Internet-facing Server R2 servers can also be done in a VPN-less connectivity called Direct Access. Based on the IPsec protocol, Direct Access still creates an encrypted connection, just not the tunneled protocol associated with Point-to-Point-Tunneling Protocol, and other IPsec-based VPNs.

The client-side via Win 7 to this VPN-less VPN connects more simply as a Layer 2 connection. Our fears of this direct connection methodology might be unfounded, as it also requires using the second iteration of Microsoft's System Health Check for admittance control. System Health Check requires quite a bit of work to control access correctly — and remediate systems that fail health checks at logon.

In Win Server 2008 R2, administration of clients — especially Win 7 — are controlled by new policy administration scripts delivered with Microsoft's CLI-based PowerShell 2.0 commandlets, some 300+ of them. Some have the capacity to push policy directives based on Active Directory connection logons or states between a Win 7 client and a server.

Win 7 improvements

Microsoft's sense of security and help desk support is improved in Win 7. As an example, the BitLocker encrypting technology can (by policy) force encryption of not only internal drives, but portable drives (think flash dongles) and other media.

The Problem Steps Recorder we first saw in the beta now works bug-free in our abbreviated testing. The idea behind the recorder is to let users to very simply record what they're doing when an error occurs, then turn the steps into a Web page slideshow with the steps taken — all compressed into a file that can be sent to a support person.

An updated communications link (SMB 2+) connects Win 7 and Windows 2008 R2 that's supposed to be more efficient for client/server communications, and Microsoft touts much faster download times — but this is RC code and testing it for speed is speculative at best.

In our testing, we found that Win 7 and Server R2 release candidates are potentially worth the ticket of buying both. The upside is virtualization, improved management control, direct access, branch cache (repetitive downloads are cached at local servers), and mobility via application virtualization and Network Access Protection. But don't forget to deploy MDOP.

Henderson is principal researcher for ExtremeLabs of Indianapolis. He can be reached at thenderson@extremelabs.com.

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Verizon: Poor training or corporate indifference?



NET INSIDER
Scott Bradner

The news story sounded awful. A Verizon operator had refused to help police find a subscriber who was missing and likely in need of medical assistance because he was behind on his bill. One of many headlines said it all: "Verizon willing to let 62-year-old man die unless cops pay \$20 of his overdue bill." I have no idea what actually happened, but what interests me is that it is entirely believable that someone working for Verizon would do something like this.

It has to be hard to be a PR person for a phone company because phone companies are awfully hard to like in the best of times. The 1967 movie "President's Analyst" portrayed The Phone Company as the common enemy of all mankind. It was not much of a stretch to accept that AT&T (The Phone Company at the time in the United States) was after world domination. To many of us concerned with the future of the Internet, the picture today is not all that much different than it was in 1967.

Almost all large service companies have bad reputations when it comes to dealing with individual customers. This is in part because a few aberrant cases got blown out of proportion by press coverage, but all too often the bad reputation is very well deserved. Clearly, if anything like what has been reported in the Verizon case did happen it indicates a woeful lack of proper training on the company's part. Any reasonable training would include telling employees that health or safety concerns must take precedence over normal business practices. In this case the police asked Verizon to enable a cell phone for a few minutes, just long enough to get some location information. One would think that common sense would have been enough for the

Verizon operator to do so, but where common sense is not common enough, proper training should have been.

Some companies or organizations seem to revel in having a bad reputation.

American Society of Composers, Authors & Publishers (ASCAP) is a good example. Any organization that threatens to sue the Girl Scouts for singing songs around a campfire must be doing so for the shock value and not to extort a few dollars from young marshmallow roasters. Others seem oblivious to the image they are projecting. Duracell, for example, is using the fear of child molestation to sell batteries in TV ads. Such a tactic should be counterproductive because it should cause revulsion, but Duracell does not seem to care.

The big carriers, both phone and cable TV, constantly try to see how much they can get away with when it comes to treating the customer like money-producing chattel. Because of this, it is totally believable that Verizon's corporate position would be to not help save a potentially dying man until someone coughed up \$20. That is a very sad commentary on the perceived state of corporate responsibility in this industry.

The credit card companies just learned that there is a threshold beyond which even politicians who need money to get reelected will be forced to act. Now the card companies will be forced to be a little bit more honest and fair with their customers. The carriers may be nearing a similar threshold.

Disclaimer: Honesty and fairness is a good thing, even at a place like Harvard. But I know of no university opinion on their presence in the business models of carriers, so the above review is mine alone.

Bradner is Harvard University's technology security officer. He can be reached at sob@sobco.com.

Why we need a single, strong federal privacy law



SECURITY: RISK AND REWARD
Andreas Antonopoulos

Regulatory compliance continues to be the main driver for security spending in almost all industries. But in essence, compliance is asymmetrical warfare: it costs a lot more to comply with new regulations than it does to write them.

The regulations keep on coming and lawmakers do not intend to slow down. If anything, regulation is driven by public sentiment, as was the case of the Sarbanes-Oxley Act (SOX) in the wake of the Enron scandal. So, if Enron gave us SOX, what does the current mess of financial scandals lead to? New compliance regulations seem inevitable even

though businesses are groaning under the burden and complexity of all the existing regulations. Which is exactly why we need a new federal privacy law.

You might be thinking that I'm contradicting myself. If we have too many regulations already, why do we need more? Part of the problem is not the number of federal regulations, but the overlapping patchwork of local, state and federal regulations. When only giant companies operated nationally or even globally, overlapping regulations were burdensome but could be dealt with. Today, however, we are seeing the emergence of the national or global small/midsize businesses — the mom and pop multinationals. Smaller businesses can use the Internet to expand sourcing and operations across the country or even the globe. So you end up with highly paradoxical situations in which small companies have all the compliance burdens of large multinationals, but none of the staff to support a compliance department.

Most regulations cover two broad areas: privacy and accountability. SOX is the big accountability regulation. Privacy is addressed by a

hodgepodge of industry specific, regional and national laws.

A list maintained by the Better Business Bureau shows 34 federal privacy laws that apply to business. Some are industry specific (HIPAA, FERPA, GLBA); some are consumer-protection focused (FCRA, FDCPA); others are specific to one agency or department (census, mail); and still others are supposed to control the government but rarely do (wiretap, CALEA, FOIA). At the state level, there are both privacy and breach notification laws in so many variations that it is almost impossible to keep track. There's California's SB1386 and its 45 or so siblings in other states. The new data privacy law in Massachusetts (201 CMR 17.00), going into effect in January 2010, takes a very aggressive stance that will likely attract followers just like California's SB1386. Add the European Union, Canada, Japan and other jurisdictions and you are looking at more than 100 privacy laws that could affect any global company. Even a small company with 100 or so employees in a few states and customers in two or three countries could be facing more than two dozen privacy laws.

That's exactly why we need a federal privacy law. All of these state and local regulations create an artificial barrier for companies to compete nationally and globally. They make every new out-of-state hire an opening for yet another massive regulatory burden. But in the end, all of these laws are aiming for the same basic goal: the protection of information about people. When there is a patchwork of local laws and a common challenge that affects interstate commerce, the federal government's role is clear and compelling. Harmonization under a single federal privacy law, one with teeth and clear rules, must be a top priority for Congress.

Antonopoulos is a senior vice president and founding partner at Nemertes Research, an independent technology research firm. He can be reached at andreas@nemertes.com.

Upgrade to Suite B security algorithms

BY BILL LATTIN

Most companies do not know what level of cryptography is required to properly protect their data lifeblood, nor do they have anyone tasked with assessing the coverage. As a result, most corporations are not following cryptographic best practices and are potentially exposed.

The first step in analyzing the required level of cryptography is to assess the value and sensitivity of your data and its associated lifetime. Some data, such as stock trades, may have ephemeral lives and be of little value beyond a few minutes. At the other end of the spectrum are electronic medical records, which may have to last more than 80 years. Data must be protected by cryptography rated for the data's lifetime and sensitivity.

The next step is to determine what level of cryptography — which has changed dramatically over the years — is required. In the mid-1980s, Data Encryption Standard (DES) was widely used to protect corporate and financial information. DES is an example of a symmetric cipher in which the same key is used to lock and unlock (encrypt/decrypt) the information, and it used a 56-bit key.

Public key (or asymmetric) algorithms such as RSA and Elliptic Curve Cryptography (ECC) use two keys — one to encrypt and one to decrypt — and were used to securely distribute DES keys to communicating parties. In the mid-1980s, RSA key sizes of only 384 bits were considered sufficient for most commercial traffic, with 512 bits reserved for very sensitive data.

Moore's law and crypt-analytic improvements made short work of 56-bit DES and 512-bit RSA keys. By the mid-1990s, we had triple DES (effective key size of 112 bits) and RSA at 1,024 bits, plus RSA at 2,048 bits was also used. In the early 2000s, the National Institute of Standards and Technology (NIST) had formally adopted the Advanced Encryption Standard (AES), with key sizes of 128-, 192- and 256-bits to replace DES.

At the same time on the public-key front, NIST and the American National Standards Institute published guidance that stated: RSA 1,024 should no longer be used to protect sensitive data by 2010; and for AES-128, RSA with a key size of 3,072 bits or ECC with 256 bits should be used.

But users and vendors have largely remained ignorant of these critical guidelines. If you ask how many conference room attendees use VPNs, all hands will be raised. If you ask how many are using AES, most hands will stay raised — and the same with RSA-1,024. If you

ask about RSA-3,072, all the hands will drop, despite NIST guidelines and regulatory pressure to ensure appropriate data protection.

With its public announcement in 2005 of the Suite B set of cryptographic algorithms, the U.S. government has raised more awareness around the need for stronger cryptography. Specifically, the National Security Agency (NSA) defined the algorithms and strengths needed to protect both Sensitive But Unclassified (SBU) and classified information for use in its Cryptographic Modernization program.

It is significant to note that these key lengths

source IT infrastructure, ECC can mean lower MIPS requirements and thus improved lease costs. ECC solutions at Suite B strengths are available from a variety of companies such as Certicom, Microsoft, Sun, Intel, Freescale, Cavium, Red Hat, Spyru, Itron and Research in Motion.

As the benchmarks demonstrate, very strong cryptographic security does not need to come at the price of performance. At a minimum, you should select the level of cryptography that matches your information lifetime and sensitivity needs.

Also keep in mind that your cryptographic solution may be deployed for years so the algorithms must match accordingly. A good example is in smart grid applications in which the electricity meter may be deployed for 20 years or more — the cryptography must still be functional in the outer years. Anyone building smart grid applications should be using Suite B level of cryptography at a minimum. As proof that superior cryptography is commercially practical, the BlackBerry uses AES-256 and ECC-521, which is comparable to RSA-15,360, exceeding Suite B requirements.

As we look to the future, it is important to assess the cryptography used in all your secure protocols, from SSL to IPsec/IKE to SSH. Corporate auditors will begin to look at the cryptographic algorithms employed in your company.

In its IT examination handbook, the Federal Financial Institutions Examination Council has established guidance that encryption implementations should include "encryption

strength sufficient to protect the information from disclosure until such time as disclosure poses no material risk."

The NSA's Suite B announcement has redefined what constitutes industry best practices. Companies with significant sensitive proprietary information, such as financial institutions, semiconductor manufacturers, pharmaceutical companies and high-tech product manufacturers, must require their network security solutions implement at minimum Suite B strength algorithms.

Lattin is CTO of Certicom, a Research in Motion company.

Suite B algorithms

	Sensitive But Unclassified	Classified	Lifetime
Symmetric Cipher	AES-128	AES-256	2031+
Hash Algorithm	SHA-256	SHA-384	2031+
Public Key Algorithm	ECDiffie-Hellman, ECDSA – all with 256 bits	ECDiffie-Hellman, ECDSA – all with 256 bits	2031+

are equivalent in strength to RSA key sizes of 3,072 or 7,068 bits, respectively (see NIST SP 800-57). SBU is the lowest classification level for information requiring cryptographic protection. These algorithms are expected to have a usable lifetime well beyond 2031.

NSA's Suite B announcement did ignite interest among certain vendors. Operating system companies such as Microsoft, Red Hat and Sun found that ECC offers significant performance improvements over RSA at the Suite B key sizes. At the 2007 RSA Conference, these companies presented benchmark data showing that OpenSSL can run as much as 11 times faster and that Apache HTTPS can deliver up to 3.8 times higher throughput with ECC at Suite B strengths.

In addition, these performance benefits extended to 64-bit architectures. The positive IT impact to business by using ECC in secure protocols is significantly improved server performance. For organizations that out-

This vendor-written tech primer has been edited by Network World to eliminate product promotion, but readers should note it will likely favor the submitter's approach.



Xandros' Presto: No rabbit in this hat

I recently discussed a useful utility for your toolbox, FreeBASIC, a BASIC compiler that is very good and, as the name implies, free. FreeBASIC is so good I awarded it 4.5 out of 5. I concluded: "The only drawbacks are that it is Windows-only, sometimes produces diagnostic messages on programming errors that make little sense, and some of the documentation is incomplete." I was right about the last two issues but, as

GEARHEAD

Mark Gibbs

reader Rod Larse pointed out, compilers for DOS and Linux are also available. I herewith revise FreeBASIC's rating to 4.75.

As I've broached the subject of *nix, it is timely to discuss a new operating system that I just got my hands on: Presto published by Xandros.

Quick digression: prestomypc.com has a big banner on the home page that does something that I hate — it immediately starts playing video with sound when the page loads. To all companies that insist on doing the same egregiously irritating, indulgent nonsense, please, please stop it. When I am working I usually have music playing and when I have my groove on I do not need your soundtrack harshing my mellow.

Anyway, Presto is a Debian derivative and it has an interesting goal: Presto aims to boot your PC into full operation within 10 seconds.

Having Windows XP or Vista installed is a prerequisite and when Presto is running you can access all of your Windows files (as long as you're using NTFS without encryption and not using SCSI drives or a RAID configuration). Other than that all you need is a moderately powerful processor, 3.5GB of disk space and 512MB of RAM.

I tried Presto on one of my favorite machines, a Sony VAIO T250 laptop, and installation was flawless (only my Web cam didn't work) and performance was mostly, but not always, better under Presto than it was under Windows XP SP2.

When I restarted my PC I was offered a boot menu. If you fail to make a choice within 30 seconds Windows will automatically boot. If you select Presto before the timeout you will be looking at its XFCE desktop environment in about 10 seconds. Woot.

Presto comes with a selection of basic utilities including Firefox, Skype and Pidgin for instant messaging, and a range of multimedia playback utilities. For more you need to run the Applications Store program, which is available from the toolbar. And here some odd thinking raises its ugly head.

The Applications Store displays icons for each installed application, including one for the Applications Store application. In fact, installing applications is a fairly painless process although don't try to install three packages simultaneously unless you enjoy watching your PC get borked.

While installing applications is easy, changing most of the configuration details isn't. You have to know Linux to make your way through the file system to find the tools you need. Even then you might run into problems. I tried to enable the display of the menu of installed programs when you right click on the desktop, only to find that feature doesn't actually work. And I'm not enamored with user interfaces where some features are launched by two clicks and others by a single click.

My big problem with Presto is it just isn't really finished: They've got most of the nuts and bolts working but they haven't finished applying the paint so it is really still an operating system for well-informed techies.

Overall I like the idea of Presto and, at \$19.95, it's a no-brainer purchase. I just think that if Xandros was doing a magic trick on stage it would have a top hat but no rabbit. I'll give Presto 3.5 out of 5.

Show Gibbs your magic at gearhead@gibbs.com.



Keith Shaw

COOLTOOLS

online nationwide).

What it is: The Q1 is the successor to BlueAnt's V1, one of my favorite Bluetooth headsets from last year. The V1 had awesome voice control features, which have been transferred to the Q1 along with additional noise-reduction features through the use of voice-isolation technology. Other features include multipoint (the ability to connect two phones and answer the one that rings), the ability to pair as many as eight devices, and about four hours of talk time and 100 hours in standby mode.

Why it's cool: Hands down, the voice control technology makes the Q1 a winner. Using your voice, you can answer incoming calls, make outgoing phone calls (through speed dial setup), check the battery life on the headset, and make sure that you are connected. The voice prompts also make this the easiest headset to configure and pair with your phone, as the voice inside the headset walks you through the process. Another cool command is the "Am I connected?" prompt, which will pair your headset with your phone automatically. This is fantastic, as one of my main gripes with Bluetooth headsets is knowing whether

Bluetooth headset Battle Royale

A few weeks ago I praised the Plantronics Voyager Pro high-end Bluetooth headset for its noise-reduction features and extremely comfortable fit. Two other headset vendors wanted my opinion, so let's check out these other contestants:

The scoop: Q1 Voice Controlled Bluetooth Headset, by BlueAnt, about \$130 (available exclusively with Sprint through early June, then

I'm connected after a few days of non-use.

Some caveats: The speed dial function only works with some phones (and not the iPhone), so making calls via voice command can be trickier than I'd like it to be. The voice-isolation feature requires a button press and is not automatic, and the technology was good but not great in my tests.

Grade: ★★★★★ (out of five).

The scoop: Jawbone Prime Earcandy Edition, by Aliph, about \$130.

What it is: Just like the Q1 and Voyager Pro, this high-end Bluetooth headset features noise-cancellation technology (Aliph calls it Noise-Assassin) to reduce the sound around you so callers can hear you more clearly. The Earcandy Edition of the Jawbone Prime adds four color options, including lime green, scarlet red, yellow and purple, making this a more fashionable choice than the other two.

Why it's cool: The NoiseAssassin works outstandingly well; the receiving party thought this was the best out of the three devices I tested. The volume control was much better on the Jawbone than on the Q1. Pairing was easy but not as easy as the Q1. The small size of the Jawbone also makes it appealing for users who don't want to look as Borg-like with their headset (especially when you compare it with the large boom microphone on the Voyager Pro).

Some caveats: The headset boasts voice dialing features, but it appears to be phone specific (it wouldn't work with my iPhone). It's definitely not the same as the Q1's voice commands.

Grade: ★★★★★

Bottom line: For comfort and noise reduction on the caller's side, the Voyager Pro is tops. For style and noise cancellation on the receiver's end, go with the Jawbone. For voice command and ease of use, go with the BlueAnt Q1. However, all three offer outstanding options and you won't be disappointed in any of them.



The BlueAnt Q1 does well for ease of use.



Jawbone's Earcandy cancels noise in style.

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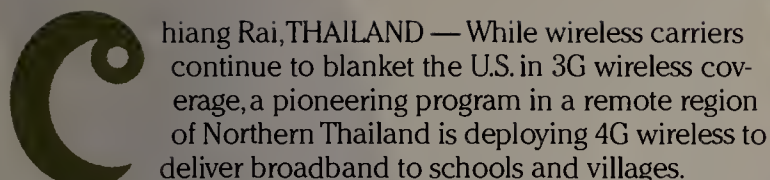
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BY ANDREW FROELICH

PILOT PROJECT BRINGS BROADBAND-BASED EDUCATIONAL PROGRAMS TO REMOTE COMMUNITIES

Wimax changes lives in rural Thailand



Chiang Rai, THAILAND — While wireless carriers continue to blanket the U.S. in 3G wireless coverage, a pioneering program in a remote region of Northern Thailand is deploying 4G wireless to deliver broadband to schools and villages.

The Thailand National Telecommunications Commission (NTC) and Mae Fah Luang University are aggressively pursuing a project called "Pilot Tele-Center for Rural Area Education and Development" with the goal of providing broadband services to 21 schools surrounding MFL University.

Eight of these schools are already using Cisco WiMAX wireless broadband for access. The pilot program is benefiting not only students and teachers through an e-learning program, but also residents in Northern Thailand, some of whom have never used a PC or the Internet prior to this project.

Mae Fah Luang University is located in Chiang Rai Thailand, approximately 15 kilometers south of the Burma and Laos borders. The school enrollment is approximately 8,000 students working in undergraduate, graduate and doctoral programs.


In 2006, the NTC, the Thai equivalent of the U.S. Federal Communications Commission, approached MFL University with a plan to assist Northern Thailand with technology needs.

According to Thongchai Yooyativong, a dean at MFL University: "The NTC asked MFL to co-propose a plan to assist in providing enhanced education to rural communities in Northern Thailand." The proposal was structured as part of a larger national ICT agenda to invest in technology infrastructure to bring enhanced capabilities to parts of Thailand that currently have no such technologies available to them.

MFL University selected TT&T, Thailand's second largest broadband provider, to evaluate WiMAX vendors and deploy the WiMAX network in the Chiang Rai region. The NTC designated a 2.5GHz WiMAX license to TT&T for use in the three-year pilot. TT&T then evaluated several WiMAX vendors and selected Cisco because of the increased throughput and distance that could be achieved through Cisco's Advanced Antenna System (AAS), otherwise known as beamforming.

Beamforming utilizes technology similar to that found in Wi-Fi 802.11n or MIMO, which can take advantage of multiple antennas to send and receive data. Using multiple wireless data streams decreases the likelihood of lost data and creates a far more efficient method of wireless transmission.

An extensive wireless evaluation was performed by TT&T to assess the best location for the antennas in relation to the schools involved in the pilot project. Northern Thailand is a mountainous region so this was critical to the plan's success. The network requirements were to provide a minimum of 3Mbps upload and download throughput from each remote site to MFL University where the server farm and Internet chokepoint are located.



Mae Fah Luang University, top, located in a remote area of Northern Thailand is at the center of a rural broadband project funded by the National Telecommunications Commission (NTC). Cisco WiMAX gear is sprouting up on buildings, center. And, for the first time, young, aspiring monks in a rural school are able to access the Internet.

The WiMAX network was completed and the eight remote sites were fully operational in late November.

Although the remote sites are physically static in nature, the WiMAX technology used is 802.16e-2005 mobile WiMAX, which allows for full mobility within antenna range. TT&T fully tested mobility and Yooyativong is anticipating a need for mobile access in the future for users equipped with laptops with built-in WiMAX radios.

The final WiMAX design called for four Cisco BWX 8300 series WiMAX base stations. One is located locally at MFL University and services two schools. The other three are at a site maintained by TT&T and are located near downtown Chiang Rai and they serve the other six schools. Each Cisco base station attaches to an antenna with beamforming technology that covers a radius of 120 degrees. Given the requirement of providing a minimum throughput of 3Mbps, the schools are located within 6 kilometers of the primary base stations. The two physical base station sites are interconnected using long-haul fiber-optic Ethernet for transport.

The pilot has been fully operational for several months. According to Yooyativong, the WiMAX remote sites have not suffered any outages or degradation in performance. In fact, the expected throughput of 3Mbps is lower than the actual realized results, which are between 4.5M and 5Mbps.

The university and supported schools are pleased with the results thus far. A stable infrastructure was vitally important for the success of the project. Because many of the teachers and students had never utilized modern PC technology, it was of utmost importance that the WiMAX solution be as efficient and reliable as a comparable wired broadband solution.

Now that the pilot infrastructure is successfully implemented, the next challenge for Yooyativong and his staff is to create useful content for students and the community at large. Besides the obvious benefits of providing full Internet access to the communities, MFL University developed an educational program for the schools.

MFL University staff members are responsible for training teachers at the rural schools

on how to develop educational content in the form of e-books. These e-books focus on core fundamentals such as math, science, English and social studies. The teachers are first trained on the basics of e-book publishing using text and images. The training complexity has been slowly increased over the months and now teachers are fully capable of developing highly elaborate e-books with embedded voice and video using various software applications.

The teachers then return to their respective schools to develop the educational content with the assistance of their students. The students learn the same techniques that their teachers recently acquired. This trickle-down transfer of knowledge has been overwhelmingly successful and the content that has been developed is outstanding, according to MFL University staffers who are evaluating the project.

Each school is designated a specific area of education as a major focus. The e-books are then stored at a server farm on the MFL University campus. The individual classes utilize the network to acquire e-book material created by other schools that they can draw upon. According to Yooyativong, the ability to collaborate between the various village schools using the WiMAX technology has helped to create a sense of community.

An even larger challenge for the project team was to leverage information provided by these new technologies to villages within the community that use hardly any technology today. These villages are comprised mostly of farmers who grow rice, pineapple, coffee and tea. Currently, the villages rely on standard radio communication for information.

Now, teachers and school children in the pilot program compile information using the Internet as a research tool, much of it related to agriculture and healthcare. This content is developed into a script that is read by

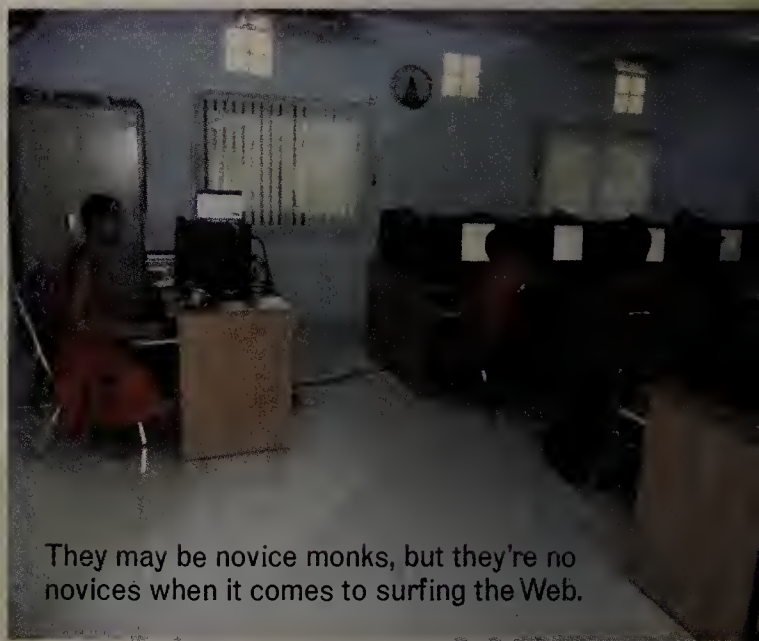
the announcers at the radio stations. The idea is to use a current technology to introduce a new medium to the communities.

According to MFL staff, it too has been a great success and communities are becoming more interested in leveraging technology to better their lives.

Eventually, the plan is to expand WiMAX and PC center locations so everyone has easy access to the technology.

Much has been learned with the Pilot Tele-Center for Rural Area Education and Development in Chiang Rai. It is clear that WiMAX is capable of handling mobile wireless data needs with a very low total cost of ownership. The other major advantage is that WiMAX can be swiftly implemented when compared with other wired solutions.

Froehlich is the owner of West Gate Networks. He can be reached at andrew.froehlich@westgatenetworks.com.



They may be novice monks, but they're no novices when it comes to surfing the Web.

Cisco BWX 8300 base stations are at the heart of the project, which includes the installation of antennas on buildings and poles across the region.



Dr. Thongchai Yooyativong, dean of the school of information technology at Mae Fah Luang University, is leading the charge to bring broadband to the school and its environs.

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Ubuntu Server: Lean, mean, cloud-making machine

Canonical's Ubuntu Server 9.0.4 is a Linux distro well suited for VARs, OEMs

BY TOM HENDERSON AND BRENDAN ALLEN, NETWORK WORLD LAB ALLIANCE

Ubuntu Server is a fast, free, no-frills Linux distribution that fills a niche between utilitarian Debian and the GUI-driven and, some would argue, over-featured Novell SUSE and Red Hat Enterprise Linux.

In our business transactions benchmarking tests, Canonical's Ubuntu Server 9.0.4 was nearly as fast as the closest Linux cousin we've reviewed recently, Novell's SUSE Linux Enterprise Server 11.

Ubuntu Server doesn't have a GUI. Instead, at installation, users have the choice of adding services, such as DNS, LAMP (Linux Apache MySQL PHP), mail, OpenSSH, PostgreSQL database, print services, SAMBA and/or TomCat Java services.

Users also can configure the server as a svelte virtual machine (VM) or manually install server applications and utilities. The installation choices are offered through a simple 'VGA' (character) graphics menu.

Ubuntu Server also includes a version of Eucalyptus — an open source tool for implementing Linux on public and private clouds. It's compatible with Amazon's Elastic Compute Cloud (EC2), Simple Storage Service (S3) and Elastic Book Store (EBS).

Eucalyptus, based on an open source project at the University of California at Santa Barbara, is comprised of a cloud controller, a cluster controller and node controller. Together, various nodes are tied together in local or disparate server locations, according to desired computational strength, and the needs of availability of the nodes to do actual work.

Because communication among the components uses Simple Object Access Protocol, a commonly understood mechanism in application development, we found building clusters into our own cloud to be pretty simple.

OEM opportunities

These selections map to popular uses of Linux servers, and an OEM installation also can be made that makes a distributable "cut" of Ubuntu server for pre-installed application server deployments.

The OEM 'cut' can 'ask questions' of user installers in order to configure or set up the server via a text-based interface. Before this version, only UbuntuDesktop could use the OEM tools, as they were GUI only.

These considerations and options are reminiscent of much older VAR (value added redistributor/developersourced) versions of Xenix, UnixWare and other i386/486 versions of Unix, and hints at the potential for this totally zero-cost Linux distribution.

In fact, the only thing you can buy is extended support, as the first 18 months of support are free. If that wasn't enough, it's also possible to strip out (at installation) any installation of 'non-free' (closed source or non-GPL/Apache-licensed) software, which will make free open source software (F/OSS) purists tingle.

Ubuntu 9.0.4 is a headless server operating system that's best downloaded from one of many mirror sites and is delivered in the form of an ISO image. From there, it can be burned to media or installed by various VM hypervisor installer applications. We tried both methods successfully.

At installation, the default file system used is ext3, which can be simply changed to ext4, ReiserFS, or even NTFS. A script guides installation, and defaults will install only minimal components, which we like.

However, when we wanted to make changes, we found some of the choices cryptic. Fortunately, each option permits IT managers to "go back" although contextual help is unavailable.

NETRESULTS

Product	Ubuntu Server 9.0.4
Vendor	Canonical www.ubuntu.com
Price	Free; long-term support plans available.
Pros	Free, good for distributable instances, most frequently used applications ready to go.
Cons	Low-bar password security, unevolved authentication.
Score	3.625

SCORECARD

Action	Weight	
Installation/compatibility	25%	4
Administration	25%	3
Security	25%	3.5
Performance	25%	4
Total score		3.625

Scoring key: 5: Exceptional; 4: Very good; 3: Average; 2: Below average; 1: Subpar or not available.

Instead, we looked up selections in Ubuntu's documentation, which is reasonable for non-civilian installers and comes either from online sources or a fat, downloadable PDF file.

There are two mail/message transfer systems that can be installed: industry stalwart postfix or exim4. The Ubuntu Server distribution includes Dovecot, which delivers POP3 or IMAP4 mail. Delivery of mail to users and list management is performed by the GNU mailman application, which is based on Python and works with either postfix or exim4.

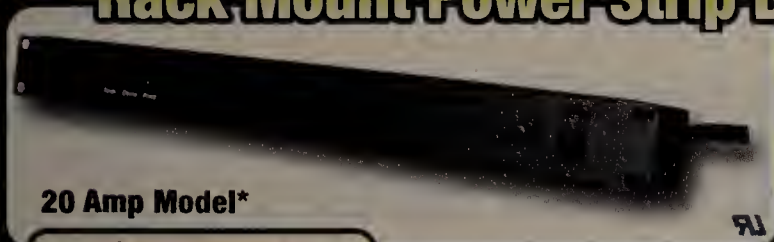
Wikis are offered through the moin moin (mine mine) application, which is also Python (and Apache2)-based. Ubuntu Server also ships with OpenLDAP as a directory services source, as well as Windows-connecting SAMBA 3.3. There's connectivity via the OpenChange library to Microsoft's Exchange Server (for versions prior to Exchange 2007), although we didn't test this.

We found some of the installation options interesting. The administrator home directory can be optionally encrypted. More interesting was the fact that the commands in the traditional /etc directory can be subject to versioning control, which ensures that contents placed there (usually utility commands and configuration files) can be rolled back, or examined for tampering.

The /etc directory uses the etckeeper package that connects to the apt, the Debian Linux command that manages packages, as in application

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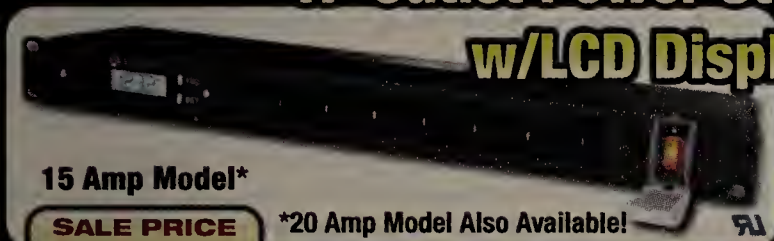


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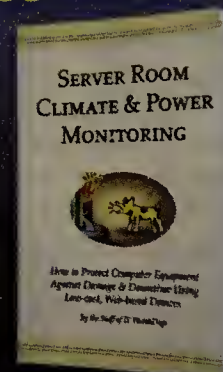
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Ubuntu

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dependencies and component relationships. Etckeeper automatically notes changes when a new package is installed or updated. You also can commit changes if you edit a file manually in /etc.

Ubuntu Server is no slouch, compared with other Linux server editions that use the same kernel (2.6.28). Using Java 1.6, the SPECjbb2005 result for Ubuntu 9.04 server (averaged more than three runs) was 42,288.67 bops compared with 42,581.5 bops for SLES 11 in our recent review. The SPECjbb2005 test largely tracks business transactions and exercises CPU and memory rather than disk and network I/O.

What we didn't like

Out of habit, we use strong passwords, but Ubuntu doesn't by default enforce them. We found it ironic that we could encrypt user 'home' directories, but their passwords could be junk.

Ubuntu Server supports the trend of not allowing a superuser/root to be run by default — meaning that root user tasks must be run by the sudo ('superuser do') root privilege command or a shell launched from it.

Ubuntu Server also features ufw (the uncomplicated firewall), which can be controlled by the debianconf tool (not included but easily downloaded), and an OEM configuration can be 'pre-seeded' with allowed and rejected ports if desired. However, more complicated rules (example: acceptance from specific IP ranges or host table sourcing for access rules) don't work until after installation. The upside is that ufw can use Linux iptables for its iptables reject (turn network traffic off to start), but this isn't the default.

Additional authentication methods are available, but Ubuntu doesn't really give much information about how to enable them; it's up to the skills of the installer to make biometric, or proxy authentication methods work. If you want a certificate authority and something like AES encryption with temporal keys, you have to install it yourself, unlike Ubuntu's larger cousins.

Back to the future

Ubuntu Server reminds us of the Xenix, UnixWare, and even early SunOS and Solaris version that were targeted toward VARs and vertical market solutions platforms. There are a lot of choices that arrive in the Ubuntu distribution, and it's based on Debian, which is known to be less experimental than other Linux distributions.

It's fast, utilitarian, and among the first Linux distros to link to clouds and clusters using standard components. Ubuntu Server's not so much lightweight, as just a little loose and fast in places.

Henderson and Allen are researchers for ExtremeLabs. They can be reached at kitchen-sink@extremelabs.com.

How we did it

We tested Ubuntu 9.0.4 in a gigabit network consisting of various client machines (HP, Dell, and Mac desktops and notebooks), principally on an HP DL580 G5 server (four socket, 16-core) containing a SAS RAID array, 32GB of RAM and two GBE connections.

We tested various features, including performance using SPEC's SPECjbb2005 test suite, where Ubuntu Server 9.0.4 performed within 3% of Novell's SUSE SLES 11, which is based on the same kernel as Ubuntu 9.0.4.

We installed Ubuntu in numerous configurations either as a native or virtual machine to see what components were installed, and the choices offered within these selections, such as LAMP server and so on. We also tested ufw, postfix-dovecot, and eucalyptus installation and basic use.

Ubuntu Desktop: Plenty of sizzle, not much steak

Ubuntu 9.0.4 Desktop, nicknamed Jaunty Jackalope, is likely to continue the Mac-like cult following for Canonical's Debian-based Linux distribution. But there's not a lot new here.

Released in late April, Ubuntu Desktop does sport some enhancements. Yes, you can get versions for 32- or 64-bit hardware and install the correct version automatically. Yes, you get an update to OpenOffice's suite of office productivity tools. Yes, it boots faster. And yes, the slim-sized Netbook Remix version of Ubuntu Desktop installed handily on our new Dell Inspiron solid state netbook.

But there's not much tremendously new compared with Ubuntu LTS 8.04 (Hardy Heron), which was released in April 2008. The biggest difference is that Ubuntu 9.0.4 supports more Wi-Fi and 3G peripherals. This is likely due to demand because Ubuntu is often deployed on inexpensive notebooks and netbooks. The drivers help, as Ubuntu Desktop supports Skype (given a working network connection) and Adobe Flash (and therefore YouTube Ubuntu users will rejoice).

Many of the desktop components are similar to Novell's SLED 11, including Brasero (a CD/DVD authoring application), Rhythmbox (a music player), Pidgin (IM) and Ekiga for videoconferencing. Videoconferencing was simple because Ubuntu Desktop easily found the built-in cameras in our notebooks and netbooks simply.

Some of Novell SLED 11 security isn't here though. As in Ubuntu Server, passwords have no restrictions or constraints for strength. And like the server version, you can't get root shells without using sudo to get them.

Like Ubuntu Server, Ubuntu Desktop version uses the apt-get file/application retriever and versioning system, although it's possible for users to get and deploy the Red-Hat Package Manager (RPM) system if they prefer. There's a Computer Janitor application that removes trash and older files according to user instructions.

It reminded me of Microsoft's janitorial services for Windows desktops and there's little doubt that Linux desktop systems can become as constipated as those running Windows.

There's also a Windows migration tool that can be used to migrate many Windows systems over to Ubuntu, or just peacefully co-exist with Windows, either via a dual-boot system, or by running Windows applications (where compatible) with WINE, an enabler for many Windows APIs and therefore Windows applications.

Much of Ubuntu's popularity stems from its success as the original desktop on several notebooks (sometimes as an option) and netbooks.

Part of what Ubuntu must do is to duplicate functionality without causing a retraining and compatibility crisis — something Microsoft knows all too well. The Ubuntu desktop applications come ever closer to Windows and MacOS. As Novell, Xandros, Apple and others go for the desktop gold, Ubuntu's continuing refinements keep it in strong competition for desktop love.

— TOM HENDERSON AND BRENDAN ALLEN,
EXTREMELABS.COM

Videoconferencing hits the big time ... for real



EYE ON THE CARRIERS

Johna Till Johnson

It feels like 1989 all over again. Wacky haircuts are back (I think I saw a mullet the other day). "Alternative rock" sounds a lot like what used to be called "new wave." Big shoulders are back. And we geeks are waxing rhapsodic about the wonders of videoconferencing.

Videoconferencing is the next new thing — for the third or fourth time since 1964.

This time it's for real, though. Conferencing vendors say sales of their gear has skyrocketed — even over the past few months, when every other tech vendor was reporting gloom and doom. And 79% of the IT pros I work with say they're deploy-

ing videoconferencing to reduce travel. Forty-three percent say they have formal policies governing the use of videoconferencing.

What's changed? Plenty. First is that compression technology has gotten steadily better, to the point where high-definition (HD) video can be transmitted across roughly the same bandwidth that was once required for its poor-quality cousins. Second, vendors have applied Hollywood lighting, camera placement and set design techniques, so that telepresence really delivers the sensation of "just like being there."

But most importantly, now that we've spent a couple of decades internalizing the concept of virtual communications, we've gotten collectively more comfortable with remote interactions. We buy big-ticket items from e-Bay and Amazon. We Facebook, Skype and instant mes-

sage our friends. So talking to a face on the screen really doesn't seem that unusual.

From an IT perspective, though, the advent of video can be a challenge. First, there's the bandwidth consumption. Even with modestly sized screens, HD video can consume a couple of Mbps per user, easy. That may not sound like a lot, but the typical branch office is still often served by a T-1 — which means a single video call could swamp the connection. So IT pros need to make sure there's plenty of bandwidth available.

There's also the problem of ensuring QoS. An MPLS network will get you what you need on the WAN, but only about half of the folks we work with are deploying MPLS QoS capabilities, because it can be tricky to set up effectively. To ensure effective QoS in the WAN, you need to map applications to QoS types — then make sure you've got adequate congestion control and QoS in the LAN.

Finally, you need to think in terms of managing and monitoring the video traffic. Most organizations don't perform detailed analysis of WAN traffic, so managing video represents a bit of a sea shift in thinking.

None of these are insurmountable, but there's a bit more to enabling videoconferencing than just plugging in the unit and turning on the monitor.

Johnson is president and senior founding partner at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

HP upgrades mobile, desktop thin clients

BY JON BRODKIN

HP last week announced a mobile thin client, and software enhancements to improve the security and manageability of its desktop-based thin clients.

HP says its 4410t Mobile Thin Client gives users notebook-quality performance while ensuring businesses against loss of data by storing all data on the server rather than on the endpoint. The mobile thin client, available in mid-July at \$550 and up, is based on Intel Celeron processors and preinstalled with Windows Embedded Standard operating system.

Weighing a little over 4 pounds, the 4410t

Mobile Thin Client includes a spill-resistant keyboard; a touchpad; a 14-inch screen; 1GB and 2GB solid-state memory and an optional DVD-ROM drive. HP first entered the mobile thin client market in January 2008 with the Compaq 6720t, which cost \$725 and up.

Separately, HP rolled out improvements to its desktop-based Windows and Linux thin clients that will improve security of the devices, and simplify setup and integration with VMware View and Citrix XenDesktop virtualization platforms.

While HP is integrating with third-party virtualization tools, Tad Bodeman, HP's thin client

marketing director, denies a rumor that HP is exiting the virtual desktop infrastructure market altogether.

A recent Virtualization.info blog post asserted that HP will stop development of its Remote Graphics Software (RGS) and Session Allocation Manager (SAM) connection broker software, exiting the virtual desktop infrastructure market by year-end.

Bodeman says that is not true and that HP will continue to enhance both RGS and SAM. "We are continuing to invest in bringing new features to those products," he says.

On the security side, HP says its t5545 Linux-based desktop thin clients now feature a stateless security mode that protects sensitive data by storing all desktop settings remotely. "Settings are automatically retrieved upon boot and removed when the local device is powered down," HP says.

New software start-up tools called HP Easy Update and HP Easy Config will make it easier to set up HP's t5540 Windows-based thin clients and integrate them with VMware and Citrix. "The two new software start-up tools make it quick and easy for customers to identify and choose the latest image and configuration settings for their thin client, helping get new users up, running and productive faster than ever before," HP says.

In another announcement, HP said several of its desktop thin clients have met Energy Star requirements, and will begin displaying the Energy Star logo in early July. ■

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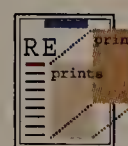
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BACKSPIN

Mark Gibbs

Cellular customer disservice

Like everyone else in these tough times I am looking to save money. Sure, I'd like to get a new Mac Pro with two 2.93GHz quad-core processors, 32GB memory, 4TB disk storage, two NVIDIA GeForce GT 120 video cards and two 30-inch Cinema displays (can you say "sexy"?), but spending nearly \$10,500 is not in my budget.

I'd also love to have an iPhone, but the service plans you have to take illustrate there is no competition (can you say "monopoly"?), and show highway robbery is not a lost art, so it is easy for me to see I don't actually need one.

In fact, considering that cell service is generally of poor quality everywhere, it really doesn't matter much which service provider you choose. As my contract with T-Mobile had recently expired I looked for the best deal I could find.

Again, if there was really any competition in the cell market, then I would find pricing plan variation from carrier to carrier, particularly in these tough times. But no such luck, which tells you that cellular service is not really a competitive market (can you say "ya think?!").

Anyway, I looked around for the best deal which turned out to be with Sprint. I placed my order for three phones via Sprint's Web site and requested that our home number, which was on a Vonage line that didn't get much use, be ported over to my wife's phone. Voila, the new plan and the loss of the Vonage line equaled a savings of more than \$100 per month (that's a lot of moderately priced Cabernet).

Then the fun began. The phones arrived in the evening a couple of days after ordering so I immediately set about getting them working (can you say "this probably won't turn out well"?).

Sprint implies in its documentation that its phones are pre-registered but you still wind up talking to a customer service rep.

This went fine until we got cut off (can you say "of course"?). She called back, I pressed the wrong button, and she went to voice mail. Before I could get her message I had to initialize the voice mail (not a quick process) which made hearing her lie that she had called me several times just that little bit more annoying.

Her message told me that I needed to dial *2 to get back to the service center but that number just told me to hang up and call from another phone. Words do not exist to express my irritation at this point.

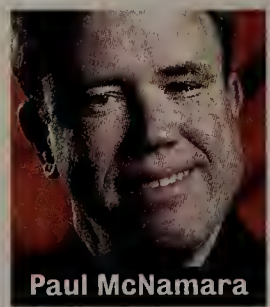
I then got some guy who was obviously in India and claimed to be named "Dwayne" or some equally implausible name for an Indian. And here I need to make it clear that I don't dislike Indians any more than I dislike anyone else (how can anyone discriminate on the basis of race or color when there are so many other reasons to dislike people?).

But here's the thing; now, whenever I hit any company's customer disservice line and hear the exotic accents of "Martha" or "Clarence" or "Bob" (for heaven's sake, you aren't fooling us, really) I immediately lose hope. And when the CSR is obviously reading from a script, confirms every exchange in excruciating detail, and thanks me for every word I utter, I also know that I am going to get service that, if it isn't completely useless, will be at best, pathetic.

To all vendors out there who might happen to read this column and use Indian service centers, let me tell you what you should have figured out by now: We aren't fooled. The moment we hear "Eric" or "Phyllis" we know that you don't care. We know that you're trying to fob us off to a service that you would hate to have to deal with yourself. But you do it anyway. Do you have no shame?

I've run out of space so you'll have to wait for next week to find out how my head nearly exploded (can you say "we can't wait!").

Gibbs is fired up in Ventura, Calif. Your febrifuge to backspin@gibbs.com.



Paul McNamara

NETBUZZ

News, Insights, oddities

5 'marketing opportunities' for hospitals

Doctors Twittering from the operating room is yesterday's news. "Brain Surgery Cam"? Now that one got my attention while reading the May 24 edition of *The New York Times*:

"The point of Shila Renee Mullins's brain surgery was to remove a malignant tumor threatening to paralyze her left side," the story began. "But Methodist University Hospital in Memphis also saw an opportunity to promote

the hospital to prospective patients. So, a video Webcast of Ms. Mullins's awake craniotomy, in which the patient remains conscious and talking while surgeons prod and cut inside her brain, was promoted with commercials and newspaper advertisements featuring a photograph of a beautiful model, not Ms. Mullins."

While "Brain Surgery Cams" are already all the rage on YouTube — go take a look, if you have the stomach — medical industry ethicists quoted by the Times did raise concerns about such practices. Of course, these ethicists do not understand today's healthcare marketplace ... nor do they watch much reality TV.

That's why I am here to help. And, whereas the "healthcare marketing consultant" quoted by the newspaper would charge a healthy arm and a leg for this kind of advice, I offer the following marketing concepts free to any hospital willing to name a wing after me.

Who's Faking Cam: We've all seen those hospital pain charts: scale of 1 to 10 ... 1 is realizing it's Monday morning, 10 is a kidney-sized kidney stone. Our "Who's Faking Cam" will watch as 10 patients describe their pain and pick a number. One contestant is actually an actor trying out for a part on "House." You get to vote on who's faking. (Standard text messaging rates apply.)

Covered or Not Covered Cam: Designed for anyone who's been screwed by an insurance company, meaning potential audiences can get no wider than this one. Watch as on-site adjusters remove the uncertainty from the process by tossing darts to determine whether that post-accident facial reconstruction is considered necessary or elective. (I'm thinking there's a "Deal or No Deal" angle here, but will leave that to the professionals.)

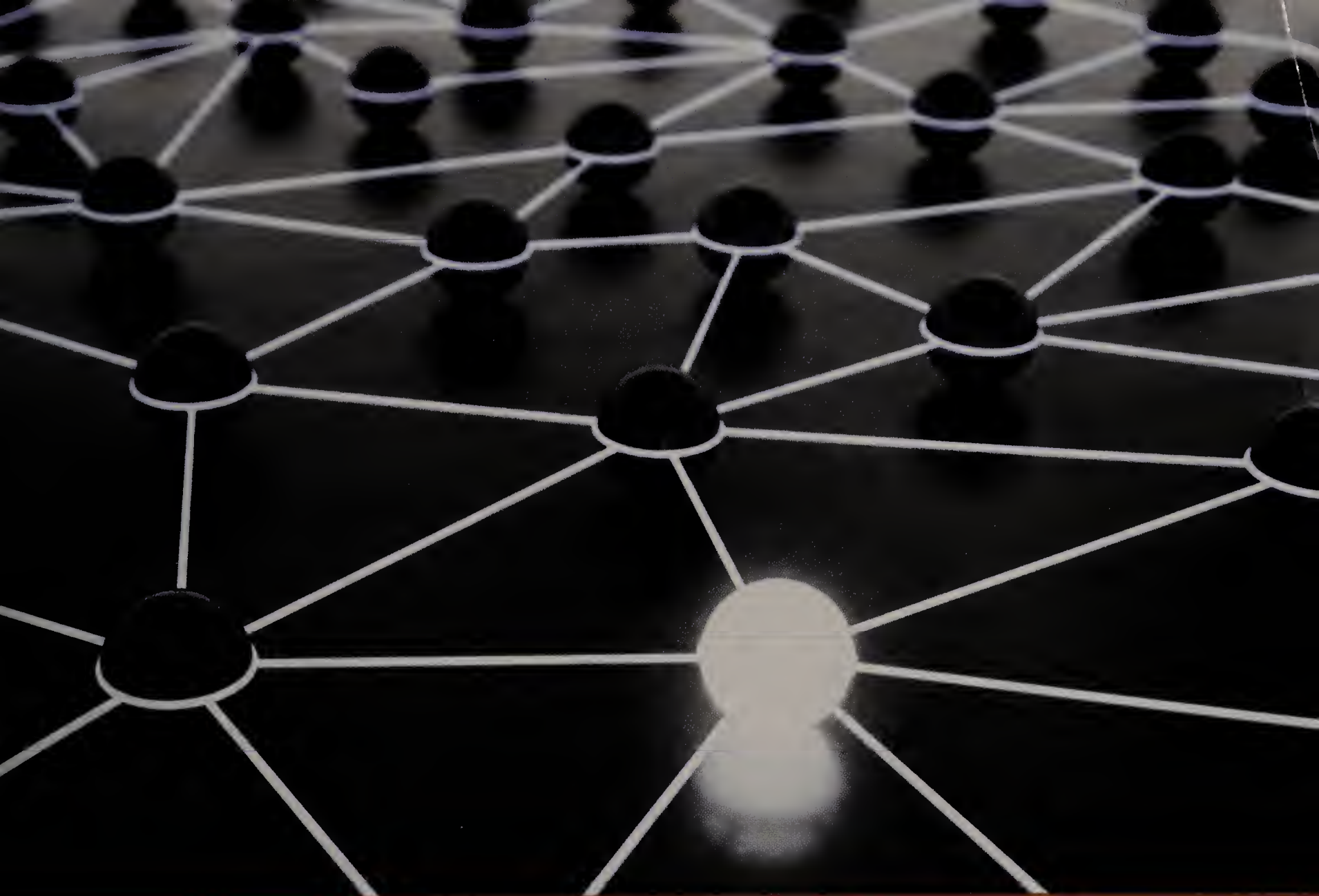
Triage Island Cam: If survival of the fittest should apply anywhere, it should be in the emergency room. If your choices are to compete with your fellow ER arrivals for the next available doctor or risk an excruciating eight-hour wait, my guess is that we're in for some mighty fine Internet entertainment. (Truly life-threatening cases excepted, of course ... darn lawyers.)

You're Going to Die Cam: Oh, don't give me that look; we've come this far and we've already established that people will spill their brains all over YouTube for 15 minutes of fame.

"You're Going to Die Cam" will capture those unimaginably tense conversations where the physician breaks the bad news. But, no longer will "How long do I have, doc?" be met with medical mumbo-jumbo and a pointless range measured in years. Instead, doctors will be required to pick an actual date and time of death. ... Gripping, I know. But here's the twist that puts this one over the top: an online predictive market where investors can buy and sell shares based on the doc's call. Who wouldn't want to bet a few bucks that tough old Uncle Thad will easily outlast the 4 months, 13 days, 10 hours and 47 minutes he's been given Dr. Doomsday?

Life in the Staff Bunk Room Cam: Doctors and nurses work long hours. They need "rest." Need I say more?

Have any suggestions of your own? The address is buzz@nww.com.



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